Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WILLIAM CHIEN-YEH LEE and MICHAEL L. OLSON

Appeal No. 1998-2723
Application No. 08/571,679

ON BRIEF

Before HAIRSTON, KRASS, and LALL, Administrative Patent Judges

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 30 through 38.

The disclosed invention relates to a wide area paging system wherein an acknowledgment signal from a pager is forwarded from base station to base station in a mesh network until it reaches a gateway connecting the mesh network to a paging broadcast system.

Claim 30 is the only independent claim on appeal, and it reads as follows:

30. A wide area paging system, comprising:

(a) a paging broadcast system for transmitting paging broadcast signals over a first channel to pagers throughout a prescribed geographic area, the paging broadcast system including one or more transmitters for broadcasting the paging broadcast signals throughout the prescribed geographic area, the system including a paging control center for initiating the paging broadcast signals in response to received paging requests;

b) a paging response system for receiving paging response signals over a second channel from the pagers throughout the prescribed geographic area, the paging response system including a mesh network comprised of a plurality of interconnected base stations for communi-cating the paging response signals therebetween over a third channel, wherein one or more of the base stations includes a paging receiver;

(c) the pagers receiving the paging broadcast signals and transmitting the paging response signals to the paging receiver of one of the base stations in the mesh network in response thereto, the base station receiving the paging response signals including a signal conversion device for transforming the paging response signal received from the pager into a signal that is properly formatted for transmission between the base stations, the base station receiving the paging response signal thereafter automatically selecting a neighboring base station to use for forwarding the paging response signals through the mesh network,

> the base stations thereby transmitting the paging response signals through the mesh network to a gateway connecting the mesh network to the paging broadcast system, the gateway thereafter transmitting the paging response signals to the paging control center as an acknowledgement to the paging broadcast signals.

The references relied on by the examiner are:

Leyburn et al. (Leyburn) 3,575,558 Apr. 20, 1971
Wesby 5,051,741 Sept. 24, 1991

Lee, "Mobile Cellular Telecommunications Systems," McGraw-Hill Book Co., 1989, pages 70 and 71.

Bartee, "Data Communications, Networks, and Systems," SAMS, 1991, pages 215 through 218.

Claims 30 through 34 and 37[1] stand rejected under 35 U.S.C. § 103 as being unpatentable over Wesby in view of Leyburn and Bartee.

Claims 35 and 36 stand rejected under 35 U.S.C. § 103 as being unpatentable over Wesby in view of Leyburn, Bartee and Lee.

Reference is made to the brief and the answer for the

[1] Claim 38 is not listed in the statement of the rejection of the claims on appeal (answer, pages 4 and 5).

respective positions of the appellants and the examiner.

OPINION

We have carefully considered the entire record before us, and we will reverse the obviousness rejections of claims 30 through 38.

According to the examiner (answer, page 4), Wesby discloses a system that broadcasts a page signal on broadcast channel F1,
and the pager transponder 50 acknowledges the page with a response TF1 to a plurality of base stations in a mesh array (Figures 1 and 2). The examiner indicates (answer, page 4) that "[t]he mesh communicates to a gateway 40 which returns signals to the paging controller 30."

Leyburn discloses the use of a gateway interface 12 between a telephone system and a paging center (Figure 1). Based upon such teachings, the examiner is of the opinion (answer, page 4) that "it would have been obvious to one of

ordinary skill in the art at the time of the invention to have utilized a gateway as claimed in order to permit a telephone network to communicate with the Wesby system."

The examiner acknowledges (answer, page 4) that Wesby "utilizes a Star communication network for communication between the central station and the nodes," but concludes that "this can be considered to be a Mesh network in some instances." More importantly, the examiner acknowledges (answer, page 4) that Wesby "does not pass signals from one node to another node in an attempt to communicate to the central [station]." For such a teaching, the examiner turns to the mesh network teachings of Bartee which provide for "alternative routes in case of failure, and is therefore advantageous over a star network" (answer, page 4). For such an advantage, the examiner concludes (answer, pages 4 and 5) that "it would have been obvious to

one of ordinary skill in the art at the time of the invention to have utilized a MESH network (one node forwards to subsequent nodes until reaching the gateway) in the above modified system in order to provide alternative routes in case of failure" as taught by Bartee.

Appellants argue (brief, page 8) that "[t]he communications stations of Wesby only communicate with the master station, but not with each other, and thus describe a bus rather than a mesh network." "Indeed, since the communications stations of Wesby only communicate with the master station, but not with each other, they have no need for . . . a signal conversion device" as claimed (brief, page 8). In summary, appellants argue (brief, page 9) that "even if combined, the cited references lack all the elements recited in the combination of Appellants' independent claim 30."

We agree with appellants' arguments. Wesby discloses a

locator system in which each of the individual communication stations 40 must communicate directly with the master station 30 (column 4, lines 56 through 60; column 5, lines 57 and 58; column 7, lines 36 through 39). If a signal from one communication station is routed to another communication station, then the locator system will not be able to locate the exact position of transponder 50. For this reason, the 35 U.S.C. § 103 rejection of claims 30 through 34 and 37 is reversed.

The 35 U.S.C. § 103 rejection of claims 35 and 36 is reversed because the mobile cellular telecommunications teachings of Lee do not cure the noted shortcoming in the combined teachings of the references.

DECISION

The decision of the examiner rejecting claims 30 through

38 under 35 U.S.C. § 103 is reversed.

REVERSED

KENNETH W. HAIRSTON Administrative Patent Judge	)	
ERROL A. KRASS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
PARSHOTAM S. LALL Administrative Patent Judge	)	

kwh/vsh

GEORGE H. GATES
MERCHANT, GOULD, SMITH, EDELL
WELTER & SCHMIDT
11150 SANTA MONICA BLVD.
SUITE 400
LOS ANGELES, CA 90025